AMERICAN VETERINARY REVIEW,

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EDITORIAL.

THE VETERINARY CONGRESS in Chicago—members present—constitution—resolutions endorsing the Bureau of Animal Industry—motion of Dr. Hopkins—condemnation of inoculation—for the present it is a good measure. PREVENTIVE INOCULATION NOT ALWAYS ADVISABLE—a review of Dr. Paquin's remarks on the subject. OUR DELEGATE TO THE CATTLE CONVENTION—his good work—are recovered cases dangerous—the Bureau of Animal Industry's opinion—it is that of many other veterinary authorities, not of all, it appears—critic criticised—Hippocrates is called to witness—will our readers discuss the subject? HOG CHOLERA—the workers in its investigations—Dr. Salmon and F. S. Billings—the former knows it is not Rouget—hesitates as to its being schweineseuche—the latter is positive it is—he has found Schutz's germ—the same organism exists in both diseases. NEW OFFICERS OF THE U. S. V. M. ASSOCIATION—a reminder to the newly elected for the work expected of them. A CORRECTION. IN THE RANKS—Dr. B. McInnes, Jr., appointed Veterinarian to the Board of Agriculture of South Carolina. OUR THANKS to Dr. Herr.

THE VETERINARY CONGRESS, referred to in our last number, was duly convened in the city of Chicago on the 15th, 16th and 17th of October, and was held in connection with the annual meeting of the National Cattle Growers' Association. A large delegation of veterinarians from various States of the Union was present, representing the interests of the profession in various capacities. Veterinary colleges and societies and State veterinarians, as well as the Bureau of Animal Industry, responded to the roll-call. Amongst the most prominent names brought together on the occasion were: D. J. Dixon, American Veterinary College, New York; J. W. Gadsden, Pennsylvania; Charles T. Goentner, Secretary Philadelphia Veterinary Society; R. S.

Huidekoper, Pennsylvania; D. E. Salmon, Chief Bureau of Animal Industry, Washington; W. H. Rose, Bureau of Animal Industry, Washington; John Casewell, State Veterinarian of Illinois; Dr. N. H. Paaren, Illinois; Paul Paquin, State Veterinarian, Missouri; J. Gerth, Jr., State Veterinarian, Nebraska; Dr. James D. Hopkins, Territorial Veterinarian, Wyoming; George C. Faville, State Veterinarian, Colorado; T. J. Herr and M. R. Trumbower, of the National Bureau of Animal Industry; and Dr. Austin Peters, Veterinarian of the Massachusetts Society for Promoting Agriculture.

The principal object of the meeting was the final organization of the Association, which came into existence a year ago, and for the consideration, from the veterinarian standpoint, of the subject of contagious pleuro-pneumonia, with the danger and damage which marks its progress, and to determine, if possible, the means best calculated to not only prevent its spread, but also to eradicate it from the country.

Various essays on the subject were read by members of the Congress, which we shall take pleasure in reproducing in our pages as soon as the papers, which the authors have kindly placed at our disposal, shall reach our hands. These will probably include contributions from President R. S. Huidekoper and from our delegate and esteemed friend, Dr. Gadsden. Dr. Faville also read a dissertation on the need of a uniform inter-State sanitary code, which was received with some demonstration of approval, and brought out much discussion among the members.

The permanent organization was completed at the meeting of Wednesday, the 17th, by the adoption of the following constitution:

ARTICLE 1. This association shall be known as the National Veterinary and Sanitary Association of the United States. It shall consist of State, Territorial, and Government veterinarians, members of sanitary boards and live stock commissions, and representatives of veterinary colleges, associations and journals.

ART. 2. The purpose of this association shall be to contribute to the diffusion of true science, particularly the knowledge of sanitary science as applied to the prevention and the spread of contagious diseases among domestic animals.

ART. 3. The officers of this association shall consist of a president, two vice-presidents, a secretary and assistant secretary, all of whom shall be elected at each annual meeting, and a majority of all votes present shall be necessary to a choice.

ART. 4. It shall be the duty of the president to preside at all meetings of the association. The usual parliamentary rules shall govern.

ART. 5. It shall be the duty of the secretary to keep a correct record of the proceedings.

ART. 6. It shall be the duty of the president to appoint a committee at each annual meeting to take up a collection or make an assessment to defray necessary expenses.

A resolution, introduced at the same meeting, proposing an expression of appreciation by the congress of the work accomplished by the Bureau of Animal Industry, elicited much discussion and considerable variance of opinion, and was finally adopted in the following form:

Whereas, The existence of contagious pleuro-pneumonia among animals in the United States is annually a source of great loss.

Whereas, The great cattle industry, commerce and food supply of the country are peculiarly threatened by the recent extension of contagious pleuro-pneumonia, and

Whereas, Real and alleged outbreaks of contagious diseases require constant investigation and control; therefore, be it

Resolved, That the State veterinarians and veterinary sanitary boards of the United States, in convention assembled, recognize the wisdom of Congress in establishing the Bureau of Animal Industry, and while heartily appreciating the valuable services rendered by the bureau in the past, we would recommend such additional legislation as to enable it to effectually extirpate contagious pleuro-pneumonia and to control such other diseases as may from time to time appear.

An election of officers followed, which resulted in the choice of J. L. Brush, of Colorado, as president, Dr. J. D. Hopkins and V. T. Atkinson as first and second vice-presidents, Dr. P. Paquin as secretary, and Dr. M. R. Trumbower as assistant secretary.

A discussion succeeded on the subject of inoculation, in connection with resolutions which had been introduced by Dr. Hopkins on the day previous. This turned out to be a serious question, and excited much discussion and wide divergence of opin-

ion. In the end, however, the original mover of the resolutions had the pleasure of witnessing their adoption, which seems, for the present, to settle the doom of the inoculation theory. The resolutions of Dr. Hopkins are in the following words:

Whereas, The contagious pleuro-pneumonia of cattle exists in certain restricted localities of the United States; and

Whereas, Inoculation is being practiced in certain States as a preventive measure and is being advocated for general adoption; and

Whereas, The experience of other nations has shown that this contagion is prevalent in localities where inoculation is practiced, and that inoculated cattle are dangerous to other animals with which they afterwards cohabit; and

Whereas, The veterinary profession of Europe condemns inoculation except in localities that are thoroughly infected and where no effort is being made to extirpate the plague; therefore be it

Resolved, That considering the limited territory infected in this country, every effort should be directed to the thorough eradication of this disease from America.

Resolved, That we consider inoculation to be an extremely dangerous and objectionable practice in the present condition of affairs in this country, and one which should be discouraged by the veterinary profession and prohibited by law as long as there is a possibility of stamping out the disease.

In considering the work performed by this second meeting, we cannot feel otherwise than well satisfied with the result accomplished in the creation of an association essentially composed of veterinarians, all of whom are men well educated and well endowed for the special work in which they have enlisted. There ought to be no doubt of the speedy enlargement of the membership from the ranks of those for whose admittance the door now stands open; and it is to be regretted that the present conditions should be as exclusive as they appear to be, for it is evident that the balance between the inclusive and exclusive provisions of the constitution is not yet just what it should be. But this may be remedied hereafter, when, it is to be hoped, suitable changes will be made which shall provide for the admission of all qualified veterinarians who may desire to contribute their own knowledge

and experience to the general fund, in return for the advantages they may derive from association with their fellows.

We can but give expression also to our satisfaction with the resolutions endorsing the work of the Bureau of Animal Industry, for we feel confident that all the officers connected with the Bureau have attended fully to their duties. We have before remarked that if the work of the Bureau fails, it will not be the fault of the veterinarians.

We think Dr. Hopkins has reason to be gratified by the passage of his anti-inoculation resolutions, as while the propriety of the operation will be generally recognized, it is pretty evident that it cannot as yet be fully accepted as a practical measure, unless the stamping-out process is to be entirely abandoned.

PREVENTIVE INOCULATION NOT ALWAYS ADVISABLE.—We have just received the *Missouri State Agricultural College Bulletin*, No. 24, relating to contagious diseases and their prevention, by Dr. Paul Paquin. It embraces a report of Prof. Paquin's sojourn in Paris; of his studies under Pasteur, Nocard, Cornil, Chantemesse, as well as attendance at the Alfort School of Veterinary Science. If there were any doubts in the doctor's mind before going abroad as to the part germs play in the causation of disease, his researches while there have entirely removed them. The *Bulletin*, written as it chiefly is for agriculturists, is replete with familiar and apt comparisons, that make the possibility of disease extension by these micro-organisms very practical and plain. It also shows these bodies to be the *cause* and not the result of such diseases.

Pasteur's methods of *attenuation* were carefully studied, and if the agriculturists of Missouri will do their part, we may soon have our viruses attenuated here, when they will be free from the fatal objection urged, in some instances, of an imported virus being *too old*.

It is also hoped that Dr. Paquin will be granted time and means to carry out investigations as to the exact nature of our swine plague, and to prepare, if possible, a prophylactic attenuated virus.

A portion of the *Bulletin* is taken up with a plea for the value

of inoculation as a preventive of contagious pleuro-pneumonia. There is no question among veterinarians as to the efficacy of inoculation in limiting the spread of this disease, nor in reducing the death-rate. But will it *exterminate* the plague? No! By advocating inoculation we give rise to a false security. We encourage all those *whose cattle are affected by this disease* to hinder and oppose the radical laws which we *must* enact if we are ever to be free from it. Prof. Paquin must realize this. Let us then cease to speak of inoculation even, until we prove ourselves unable to rid the country of this exotic plague. Inoculation means contagious pleuro-pneumonia forever; it does not *hint* at extermination. Let us emulate in Missouri the good work done in Massachusetts.—(M.)

Our Delegate to the Cattlemen's Convention.—We have received a communication from Dr. Gadsden, who had kindly agreed to act as delegate of the Review before the Cattlemen's Convention, which was held in Chicago on the 15th, 16th and 17th of last month. After relating the results of his investigations, which so evidently helped him to prove beyond doubt the existence of contagious pleuro-pneumonia, and assisted him in converting many unbelievers in the presence of the disease, our friendly correspondent calls our attention to the action of the Convention relating to the resolutions passed by the veterinary association concerning the adoption of the stamping-out process with appropriated indemnity to the owners, and the prohibition of inoculation as a means of arresting the progress of the disease. We understand that the following extract from the report of the Bureau of Animal Industry has been of much assistance to Dr. Gadsden in obtaining the points for which he was fighting:

Second Annual Report of the Bureau of Animal Industry, 1885—p. 145.

"It has also been observed that inoculated animals are dangerous to others for an indefinite time after the operation. Probably this is due to the fact that such animals were really recovered cases of pleuro-pneumonia. A herd of animals inoculated with pleuro-pneumonia virus is consequently an infected herd, and should be treated as such, * * * but if the malady is to be extirpated, the whole herd must be slaughtered. In no other way can there be a certainty that all affected animals are destroyed, or that the contagion is extinguished." *

"From a careful study of the whole subject of inoculation for pleuro-pneumonia, we conclude (1) that this practice does not greatly lessen the losses which occur from lung-plague infection; (2) that it is powerless to extirpate pleuro-pneumonia from any country; (3) that it can only be practiced with safety to the community where the inoculated herds are kept under careful supervision, and where inoculated animals can only leave infected premises to go to slaughter; (4) that there is no good reason for practicing inoculation in America, and that it should be prohibited by law, except where the conditions just mentioned are rigidly enforced."

The discussion of the subject of inoculation might also with propriety have been made to cover and include that of the danger attending the "so-called cured cases." Perhaps in the estimation of the assemblage present, these dangers are too well known and too generally recognized to need re-discussion. Perhaps, also, their own observations, as well as those of Law, Salmon, Lyman, Michener, W. B. Miller, McLean, Gamgee, Fleming, Walley, Delafond, Reynal, Bouley, and many others, were deemed sufficiently strong and decisive to satisfy them that a "recovered" case of contagious pleuro-pneumonia is a dangerous animal.

But this, it appears, is not the opinion of every veterinarian, and this varied opinion (not, of course, any the less entitled to respect because of its variance) has just now subjected us to the enmity and severe animadversion of one of our friends, as the following article indicates. We copy it from the *Turf, Field and Farm*, where it appears as a reply to some remarks of our own in our last number:

THE CRITIC CRITICISED.—Having in a previous issue commented on an article on contagious pleuro-pneumonia, furnished us by Dr. Gadsden, of Philadelphia, for publication, the editor of the AMERICAN VETERINARY REVIEW criticises us severely for stating the doctor's "so-called cured cases" were in nowise an infecting medium. We called attention to the fact of having conducted *a careful* experiment with a view to determining the contagious nature of such cases, and found to our satisfaction that the malady could not be reproduced from the contents of an encysted lung, and also to the tendency of professional people to jump to conclusions. The latter, our antagonist inadvertently admits, has in this case been done, then launches into the ambiguous statement and a liberal use of italics, thus:

"And his opinion is based on—what? *On a process of experimentation, which, perhaps, was not carried out by the supporters of the contrary opinion, but* BY HIMSELF. We agree with him; evidently, his experiments were not followed by any processes producing anything resembling contagious pleuro-pneumonia, or its remotest symptoms. But a little careful thought must lead to the conclusion

that these experiments were of no value to the inquiry presented. Too many evidences exist which seem to prove this dangerous condition of 'recovered cases.'"

Shades of Hippocrates! Mr. Editor. "Seem"—is this the best you can do? Can't you give us one little fact? But perhaps you will tell us how Pasteur arrived at his great results; how Jenner immortalized himself; how preventive inoculation against contagious pleuro-pneumonia was first understood, but by a carefully conducted process of experiments. Can you name any other mode or method of procedure that will furnish as positive and reliable results? Experiment is a great magic wand wielded by the student of morbid pathology, to extricate from the depths of oblivion those things the medical fraternity are so eager to call science. Deprive him of this, and you reduce him to the condition of a water-logged ship on a boisterous sea. Again, he tries to prop a weak position by citing a single English veterinarian as follows:

"The lot of cattle in which the disease first appeared was bought in April, 1884, and remained apparently healthy up to July of this year (1885); the disease was then developed, and in so violent a form that the fisst animal died on the seventh day. This rapid death, not usual in this disease, was explained by the post-mortem examination, which revealed the disease in two forms or stages, namely: recent acute disease, and old encysted cases. The latter had lain dormant for fifteen months."

Inasmuch as the author of the quotation refers to this as *one of a number of outbreaks, it serves nothing.* If these cases had a second attack, which we do not believe, there is just as good reason for believing they contracted the malady from extrinsic or from intrinsic causes. We do not believe an animal that has passed through an *attack and recovered will ever have another.* If so, what becomes of preventive inoculation? When a lung is once diseased, it is a well-known fact that it is ever afterward susceptible to sporadic influences, and the veterinarian simply mistook a case of ordinary sporadic pneumonia for something else.

Again, he writes:

"To conclude, we cannot help believing that such assertions as the one made by the well-qualified veterinary editor of *Turf, Field and Farm* are most unfortunate. There are already sufficient real difficulties in the way of the important work undertaken for the eradication of the disease from the country, without introducing others, without validity or value, which will not stand the test of careful inquiry, which have been proved erroneous, and which at best, if undoubtedly correct, would, after all, simply save the lives of a few poor old broken-down animals, useless in life, and worthless even after death."

Mr. Editor, do not waste time in useless fretting, but manfully make another attempt to secure that which seems *so easy*, but which you have so signally failed in doing this time, and thus undo the wrong we have inflicted. Does it not occur to you that you may be the sensationalist in this case and not I? The veterinarian is looked upon as a preserver and not a destroyer of life. The knacker can do that even better, and it conforms to his calling. This is not a question of dollars. An animal is not always preserved for its intrinsic value alone, and when the veterinarian informs his employer that we can kill but cure his case, he

invariably drops a peg in the confidence of that client. Let us cite a case in point: Over in Jersey the State Board of Health, acting under State law, has the management of contagious pleuro-pneumonia, and by its perfidy, want of practical knowledge of the disease, and indiscriminate slaughter of everything that is so unfortunate as to be sick, has wrought a reign of terror among the farmers and dairymen of that section. As soon as an animal shows the slightest tendency to indisposition, it is at once taken to some secluded place and jealously guarded from all obtruding eyes, fearing lest the Board should hear of it and cause a valuable animal to be destroyed which usually recovers. Over there every sick animal the Board sees or hears of is magnified into contagious pleuro-pneumonia and slaughtered on the assumption that it may be a dangerous case. Being aware of this, the farmer fears to trust any one, and thus veterinary practice among bovines is at a minimum in Jersey. Now, Mr. Editor of the REVIEW, if you will show us a single instance where a "so-called cured case" has *seemingly* produced an outbreak of contagious pleuro-pneumonia, we will undertake to show you a more direct avenue through which the same malady was contracted. Come with us for a single day, and we will show you a number of such cases that have mingled with otherwise healthy herds for months and years without superinducing a single outbreak. This is fact against your theory.

The breeding interests of our country have suffered greatly from such sensationalism, and we propose to do our little toward restoring a lost confidence.

VET. ED.

"Shades of Hippocrates!" to use our friend's exclamation. We certainly never intended to wound his feelings, and we re-peruse our remarks in vain in search of any word or phrase to which umbrage can properly be taken. About all that, we believe, need be said in answer is, that on this important question, and of course, a universal truth—"one positive fact can never be upset by millions of others," if the circumstances in all are alike. With many others, we believe that these "recovered cases" are dangerous, and we cannot conceive that the experiments referred to by our friend have been anything more than a peculiar mode of inoculation, and that he ought to be very thankful that his manipulations were not followed by septic complications, as might have been the case. Our columns are open to any of our readers who may consider the subject of sufficient interest to warrant its further discussion.

HOG CHOLERA seems to be the disease which at present, next to pleuro-pneumonia, principally occupies the attention of veterinarians and other investigators. Amongst the latter, none have occupied a more prominent position than Dr. Salmon and Prof.

F. S. Billings. Dr. Salmon has for years occupied his time in searching for the germ which, in his view, originates the disease, and has at various periods embodied in his reports to the Department of Agriculture his scientific views and discoveries, with announcements of what he believes to be the true cause and nature of the swine plague. Our readers have been made largely acquainted with the fruits of Dr. Salmon's labors, to which they have had access through his published reports to the Bureau of Animal Industry. Unfortunately, Dr. Salmon has sometimes been obliged to revise and correct his opinions, and he has not hesitated to do so whenever new discoveries and developments have brought new light to his mind, and new convictions to his judgment.

In one of his later reports he announced his conclusions that past all doubt the hog cholera of this country was not the same disease as the one for which we had provided him with Pasteur's vaccine, and positively stated then that it was not the Rothlauf of the German. Was it the schweineseuche? He was not prepared to say, for he has offered us the "gratuitous observation that it would still be premature to jump to the conclusion that even the German schweineseuche is identical with our hog cholera."

Dr. Billings, on his side, has also worked hard in the investigations of hog cholera, and has arrived at the conclusion that the German and American diseases are similar, by the discovery in a choleraic hog of an organism entirely similar to that described by Schutz in schweineseuche. The communication we begin reprinting to-day from Dr. Bowhill will on that account be found most interesting. We regret that the paper does not come direct from Dr. Billings, as it would give positive data establishing beyond doubt its priority of discovery. The priority, however, in this case is of secondary importance, and a matter of only personal concern. The great question seems now settled that the American and one of the German plagues are identical in their nature.

New Officers of U. S. V. M. Association.—We publish the list of officers elected at the last meeting of the United States Veterinary Medical Association, and the members of the various

committees, with a hope that in our doing so we may remind all of those, at least, upon whom any special duty may devolve as members of committees that they be prompt in preparing themselves for the active discharge of their functions.

Correction.—At the suggestion of Dr. J. C. Meyer, Jr., we correct a statement made in the Review of last May, which erroneously placed a contribution to the Bouley monument to the credit of the son instead of the father. Our good friend Dr. J. C. Meyer, *senior*, it is, who will be perpetuated in one or more of the stones of the monument which commemorates the great veterinarian.

In the Ranks.—South Carolina, it seems, has no desire to occupy the rear of the great army of progress in veterinary science. We have just received the pleasant announcement of the appointment of Dr. B. McInnes, Jr., as veterinary surgeon to the Department of Agriculture of that State. Our sincere congratulations are tendered to the doctor, who is well deserving and is well fitted for the position.

Our Thanks are tendered to Dr. Herr for the handsome photographic pictures he sent us from Chicago. They represent sections of lungs obtained from animals destroyed in the Phenix Distillery at various dates, and show the characteristic lesions magnificently. We intend to have them framed and placed in the museum of the American Veterinary College.

ORIGINAL ARTICLES.

CANINE INFLAMMATORY MASTOID DISEASE.

By G. Archie Stockwell, M.D., F.Z.S.

(*Continued from page* 356.)

Caries and necrosis may occur in the following positions:—1. In the external plate of the mastoid, and in the posterior wall of the meatus. 2. In the inner wall of the tympanum involving and destroying the *cochlea* and *semicircular* canals. From a canine skull before me I withdrew a piece of necrosed bone that would fairly rival the mass obtained by Mr. Peter Crompton from

the ear of one of his patients, and that embraced the *whole* internal ear, *vestibule, cochlia and semicircular canals.* 3. In the tegmen or roof of the tympanum, and also in the antrum, provoking meningeal inflammation, or, perhaps, abscess of the middle lobe of the brain lying above; in the inner plate of the mastoid, also resulting in meningitis, cerebral abscess, thrombus of the lateral sinus, and resultant *pyæmia:* or a phlebitis may extend from the mastoid cell along the mastoid emissary vein, involving the lateral sinus, thereby securing thrombus, and ultimate fatality.

Some of the more rare occurrences of mastoid disease, or *freaks*, perhaps, would be a better term, are: Inflammation of and congestion of the eye and orbit of the affected side with, perhaps, protrusion of the globe. Cerebral abscess of the middle lobe occurring on the opposite side of the head arising from reflex and sympathetic causes, and periosteal abscess midway between the mastoid process and occipital protuberance.

In asthenic subjects, whether the condition is one of long standing or a sequel merely to the disease itself, inflammation is equally prone to advance to caries and necrosis with little or no manifestations of acute suffering or pain; consequently the speculum and mirror must be relied upon largely for diagnosis. At intervals too, during the progress of the disease, pain if present will altogether subside or disappear, and such subsidence is the more unfortunate in that it inculcates a prognosis that is sure to be a cause of regret later on; especially is this so if there is coincident disappearance of tumefaction and swelling.

As before suggested, febrile conditions may be altogether wanting; especially is this the case after the inflammation has passed from the acute to the chronic stage. More is to be depended upon a dry parchment skin, dry staring coat, dry glassy eye and a hot ear; the nose is hot, yet may be either dry or moistened, according as inflammatory products do or do not find their way through the eustachian tube and posterior nares.

While you may find a natural and safe outlet by process of time and disintegration and with much less serious attendant results than might reasonably be expected, a vast amount of unnecessary suffering is included along with "wear and tear"

that can with difficulty be estimated. The vital resources are sapped, wasted and frittered away generally, and a system already impoverished and drained must needs be further weakened by injudicious delay.

To a query why inflammatory mastoid disease is so severe in its course and results, a critical examination of the parts involved affords ample reply. Aside from the anatomical relations already noted are a complex system of veins ready and waiting to take up the poisonous materials and carry them to heart and lungs for elimination, and whence the surplus remaining is distributed to the whole economy in vain effort to find new outlets, we find an intricate net-work of nerve filaments constantly conveying morbid impressions and influences to the great nerve centres. The *seventh pair* of cranial nerves is primarily devoted to the uses (and abuses) of the auditory apparatus, while through its third branch, by way of the otic ganglion, the *fifth pair* send minute filaments to meet those of the *seventh* in the innermost recesses of the mastoid cells, and we know full well that the burdens of any one nerve or series of nerves are in some degree borne by others, even those most remote. Again in mastoid disease the pus is enclosed in a dense bony case, and while it may, and sometimes does (though rarely), penetrate the external wall, it is still held in firm bondage by the interposition between it and the outer integument, *first* of a dense periosteum, and *second* by tendons even more impermeable. Though it is possible for tendons and periosteum to be torn from their attachments to the bone by excessive accumulations of purulent matter behind them, a terrible power is at the same time brought to bear upon the inner or cerebral table of the mastoid, and if not interfered with, from the most favorable points of view a profuse abscess must result, extending over a space two or three inches in diameter, burrowing downward and backward amidst the tissues of the neck.

Whatever the character of aural disease, the local treatment should consist, from first to last, largely of hot water douches. With man we begin with water as hot as can be borne; but with the dog the process must needs be reversed. Commencing with fluid at about 90° Fh. the ear is carefully steadily syringed

by means of a hard rubber ear syringe, gradually increasing the temperature until restlesness is manifested, continuing the highest degree of heat that can be borne for a quarter of an hour or more. Speedy relief from pain is not only thus afforded, but inflamation abated; and it may be largely dissipated by renewal of the operation once or twice daily. Great relief may be had also by painting the drum membrane and aural canal with a four per cent. solution of brucine, which is generally advisable a few moments before resorting to the use of the speculum. Almost any good aural speculum answers the purpose of examining the ear of the dog, though my preferences are for the silvered glass modification of Wilde, its length over the silver speculum being a decided advantage, as well as its greater light-reflecting surface. The use of oils and caustics within the ear cannot be too strongly condemned; both produce untold miseries, the former by enforcing the opposite of cleanliness, encouraging accumulations, the latter by destroying healthy tissue; if caustics or astringents appear essential they should be applied only through the speculum by means of a brush, directly to the part, avoiding healthy surroundings. As a sedative and poultice, the hot water is unexcelled, and meets not only all the indications, but has the superior merit of cleanliness.

A vigorous cathartic rarely comes amiss at the outset of otic troubles, especially in mastoid abscess, even before operative procedures are instituted. One is rarely permitted to view a case of *otitis cellulosa* in which marked disturbance of general functions is not broadly defined, especially defective nutrition owing to non-assimilation and a circulation overburdened with poisonous and effete products. Indeed, a constitutional derangement may be at the bottom of the whole trouble. A mercurial—I record my preference for a *full* dose of calomel and colocynth comp.—followed by a saline, as sulphate of soda or magnesia, will prove most satisfactory; after which *quinine*, *iron*, *nux*, *ipecac*, *euonymin irisin*, etc., will have due value. The objections usually advanced against calomel disappear if a *full dose* is given; it is not a remedy to be dabbled with, or suitable to half-way measures, ten grains is none too much for a large-sized dog. A

preparation of iron that is most desirable is found in the *hydrated succinate of the per oxide*, as made by Stewart of Baltimore, as it is free from those disagreeables that usually pertain to ferric preparations, is tasteless, and, above all, easily soluble, and a *hepatic stimulant* as well as a general tonic.

When there is no discharge from the tympanum, and examination by means of reflected light (mirror and speculum) reveals a tense, bulging, drum membrane, the operation of *paracentisis tympani* should be performed without delay, immediately followed by the hot water douche. This not only relieves the inflamed cavity of its imprisoned fluids, but contributes not a little to the comfort of the animal. Neither is it a serious or difficult operation to one familiar with the anatomy of the parts, and Wilde's dart-like knife, with its bent or angular handle (made for this purpose), removes the only serious difficulty; it should be sharpened anew, however, for each operation. The objection that will sometimes be raised, that a drum membrane once perforated is ever after rendered unfit for its office, is utterly untenable, as well as that other bugbear, that it induces permanent *dysecœ*. The *membrana tympani* is frequently perforated and restored in man without the knowledge of the individual, and a permanent opening therein, unless with great loss of substance, does not necessarily result in loss of hearing. Certainly as much can be expected of the animal!

When the drum membrane gives promise of neither pus or mucous within the aural cavity, and paracentisis and other operative procedures are futile, a blister over the tender and painful portion of the mastoid will probably be of service, or in lieu of blisters, cupping and scarification may be tried. *Oleate of mercury* with *oleate aconitia* or *veratria*, equal parts, frequently answers every purpose of cantharidal collodion if persistently persevered in and well rubbed into the part; but Squibb's *oleates* alone have proved satisfactory in my hands, from the fact that others are not to be depended upon, owing to uncertain and varying strength.

When all else fails, resort must be had to the knife, making a free incision down to the bone, dividing its periosteal covering, selecting for the site of the operation the face of the mastoid promontory nearest the auricle. If pus yet fails to exhibit itself,

extend the opening through the outer plate of the mastoid, when compensatory results are almost certain to be obtained; even if pus does not appear, the operation will be followed by decided improvement. Of course any carious or necrosed bone should at once be removed, and as thoroughly as possible, and in all cases the wound must be kept open until pus ceases to flow or until all evidences of inflammation and disease have subsided.

A cartilage knife answers all purposes in making an incision through the bone, though a small chisel or gouge, if well kept under control, is equally satisfactory. The operation is not one of great moment, and an anæsthetic is not always necessary if the operator be at all skillful. For brief operations upon the dog a drachm of *ethyl bromide* answers every purpose and possesses the advantage of quick administration and recovery.

Regarding the excoriations of the external ear—the so-called "external canker,"—let me say such are commonly amenable to thorough and persistent cleanliness, time, and mild dressings. Their supposed malignant character is due to accumulations of foul material derived from the meatus, adhering to the hair, and setting up an irritation that becomes move virulent if the cause is not removed; moreover, the sluggish nourishment afforded the auricle is inimical to rapid repair. The ear may be confined for convenience and safety, but antiseptic cotton or oakum should be placed between the auricle and meatus to intercept the discharges.

A word regarding dietary. The popular works upon the dog are accustomed to deny animal foods in diseased conditions. A moment's consideration of the physiology of the alimentary apparatus is convincing that the creature is illy fitted for digesting easily or readily any other; to administer such other nourishment is to give a *stone* in lieu of *bread*; the same may be said also of so-called *beef teas*. Strong meat-broths should be the rule first, last, and always. In lieu of proper food supply being received, carbo-hydrates must be added, and even malt serves some purpose, though it does not have the same value as when administered to man. *Oleum morrhuæ* is excellent, though frequently but illy borne. There is nothing magical about cod-liver oil, it is

only an easily digested form of fat, without being the *best* fat by any manner of means. This must be a matter regulated to meet the requirements of the individual animal. Tonics, nourishing food, cleanliness, pure air and comfort, are the essentials in this as well as other diseases.

CASTRATION OF CRYPTORCHIDS.

By M. Jacoulet.

(*Continued from page* 361.)

The means employed for the removal of the testicle in ordinary operations of castration are not always available for application to the various cases of cryptorchidy. For example: if the operation is for either the inguinal or abdominal variety, the shortness of the cord may render the use of the straight or curved clamps quite impossible. Moreover, their application in abdominal cryptorchidy is more or less liable to cause an exaggerated traction of the cord, which may result in a hernia.

Mr. Diriex and others apply a ligature to the cord, and either proceed to amputation at once, or depend upon the sloughing process for the final removal of the testicles. This method is often employed in preference to that of the clamps, but is liable to the objection of being inapplicable to some of the varieties of the abnormality. And, moreover, itinvolves the danger arising from the presence of a foreign body in the wound, and the consequent interference with the course of cicatrization. And, again, it may lead to an access of peritonitis, when, after the dropping of the testicle, the cord is retracted and draws with it into the abdomen the ligature which retains its contact with it.

For these reasons we prefer the method of direct division, as being of easier application and leaving no foreign body in the wound, and requiring no further surgical interference subsequent to the completion of the operation.

Of the operations of the first rank, we prefer that of crush-

ing with the Chassaignac ecraseur. However short the cord may be, so long as it reaches the inguinal interstice, and which is always the case, the chain may be easily applied above the testicle.

In place of the ecraseur, however, we sometimes employ the method of limited torsion, which presents nearly the same advantages. In performing this manipulation, the testicle being exposed by the division of the vaginal sheath when it exists as in inguinal cryptorchidy, or even if this condition does not exist, the section is made through the entire cord, or after the division of its posterior portion. It may be effected by using either the two forceps, as in ordinary castration, or one only, with which to perform the twisting while the limited torsion is secured with the hand.

Cauterization is another means of division of the cord, which we consider likely to give excellent results in the castration of cryptorchids.

An important question must now be determined in the problem, whether in a case of double abdominal cryptorchidy it is wise to operate on both sides on the same day? To this query we believe the answer must be in the negative. In the first place, it is not probable that it will be found practicable to bring out both testicles through the same opening, on account of the difficulty of finding the second, and the danger of eventration resulting from the process of searching for it.

And again, even supposing that the second testicle could be readily found and secured, the length of its cord would not be sufficient to admit of its being drawn down the inguinal interstice of the opposite side. And lastly, after the section of the cord, the retraction of its extremity in the abdomen would be likely to give rise to a bloody effusion and an inflammatory action, which would frequently end in peritonitis. And again, in perforating the two inguinal interstices, a hernia would most likely take place through the first perforation while the second operation was in progress, since necessarily there would be more danger of peritonitis from two peritoneal wounds than from one. We believe, therefore, that it is the course of prudence to wait until the

patient has recovered from the operation on one side before subjecting him to a second shock upon the other. This is the course we pursued in the only case of double abdominal cryptorchid which has come under our observation. But when the double ringling is inguinal, or abdominal on one side and inguinal on the other, it is our custom to operate on both sides at the same time.

D.—*The Dressing.*—As complementary to the operation, Mr. Diriex, whose method is that of the ligature without immediate amputation, applies the continued suture, which is removed on the third day, when the testicle is allowed to drop.

Mr. Paret, after simply dividing the cord and cauterizing the end, applies a dressing of oakum dipped in oil, which he pushes up to a distance of about five inches, and keeps in place with two stitches. This dressing is entirely removed after forty-eight hours.

Mr. Degive's advice is to leave the wound without dressing, unless eventration threatens, in which case he recommends the use of a padding of oakum, to be kept in place with sutures. This was done in thirteen cases previous to 1875, with quite a satisfactory degree of success.

We have ourselves discarded all dressings, and in so doing have done well. In one case, however, hernia appeared before the animal was left to get up, and although it was reduced, the animal died. We have since then had recourse to the following dressing: A ball of oakum, about the size of the fist, and oiled, is pushed to the entrance of the inguinal canal, between the edges of the inferior opening, but no further, and the scrotal skin is brought over it and kept in place by an interrupted quill suture, which is left in place forty-eight hours, after which period hernia is not to be feared. The dressing is then removed, in order to allow the escape of any discharge which may have accumulated. The object of this dressing is less to counteract the apprehended hernia, if it is otherwise disposed to occur, than to prevent the intestine from coming down outside of the wound if hernia should exist while the reduction is being made. Besides this the dressing will always serve as a preventive of hemorrhage.

VI.—*The care or nursing of the patient and contingent accidents involved in the Castration of Ridlings.*

In the case of inguinal cryptorchidy, the accidents and necessary attentions are similar to those which are attendant on ordinary cases of castration; but in the abdominal variety they are not the same.

On the completion of the operation, the animal is placed in a stall, with his bedding so arranged as to elevate the hind quarter, and remains thus secured for from twelve to twenty-four hours, in order to prevent his rolling in case of violent colics.

The application of a large mustard poultice is advised and recommended by many. We believe it is quite as well [and better—Ed.] to dispense with this. The animal is to be well covered and placed in the most favorable atmospheric and hygienic conditions, and should be left quiet and subjected to severe dietetic regime, including a little hay, good straw and mashes. Mr. Degive gives one ounce of arnica daily. We have abandoned this practice, and recommend, instead, mucilaginous rectal injections, with a little nitrate of potash in the mashes.

The operation is followed by high fever, of several days' continuance, but which need not excite any alarm; it will generally subside after three or four days. The œdema of the sheath then becomes diminished, the hind quarter becomes less stiff, and suppuration is established; phenic acid washing is all that is now indicated. Towards the fifth, sixth or eighth day the food may be increased, and walking exercise may be ordered towards the twentieth. Complete recovery takes place in from thirty to forty days.

Accidents.—The contingent accidents chiefly to be apprehended are two: hernia and peritonitis.

1st. *Hernia.*—Generally the rupture immediately follows the operation, when the animal is allowed to get up, though it may also take place, after a violent effort, a few hours subsequent to the operation.

This is always due to the fact that the perforation of the inguinal intestine has been made too low, near the median line, or because the hand has been pushed through the fibres of the

small oblique while entering the abdomen. Degive says: "This complication is almost impossible if the internal opening of the artificial interstice is high up."

When this accident takes place, the animal must be thrown and secured, and operated upon by padding, or even the suture of the external inguinal ring.

Mr. Degive recommends this as very efficacious, and easy to apply, "by a curved needle being run through the crural arch and the anterior lip of the ring, in order to bring them together and completely close the principal hernial opening."

Both modes of reduction are effective, though we prefer the padding; but it must be understood that whichever method is employed, the case is always serious and likely to end fatally.

2d. *Peritonitis.*—We have not yet met with a case of peritonitis, excepting as the sequel of hernia. It may, however, take place, as it does in ordinary castration. Sinapisms, mercurial frictions, which are indicated as preventives, are, *à fortiori*, the proper modes of treatment. Mr. Diriex has obtained good results from the use of oil of turpentine, both internally and externally.

We need say nothing here of tetanus or other complications which may follow any treatment. They offer nothing essential or special to the case, and we have not yet encountered them as associated with the subject in hand.

VETERINARY LEGISLATION.

By Dr. Wm. Herbert Lowe,
State Veterinary Inspector, Paterson, New Jersey.

As there seems to be some difference of opinion among members of the profession as regards the affairs of the State Veterinary society and veterinary legislation, perhaps it would be well for me, as Secretary of the Veterinary Medical Association of New Jersey, to explain briefly how I stand personally in regard to this important subject. I regard it as a duty I owe to the veterinary surgeons of New Jersey. If my views are erroneous, and therefore conflict with those of the majority of the veterinary

graduates of New Jersey, they, my constituents, are in duty bound to nominate and elect a successor to me at the next annual meeting, which will take place in April, 1887. Until that date they will have to suffer for the mistakes they made at Long Branch, August 6, 1885, and confirmed at Morristown last April.

No one would more freely admit than I do that there are a few non-graduates in our State as worthy, and, if you please, more worthy than some graduates, yet I believe we have to draw a line of demarkation somewhere, and where shall we draw it if not between the graduate and the non-graduate. I believe that there are a few self-made veterinarians in the State that a license should be given to by the State society. This would give a few experienced practical men a legal opportunity to practice, but it should be stated plainly on their certificates that they are licenciates of the State society and not college graduates. But I do not believe that they should be admitted to regular membership in scientific societies.

There are several of the State veterinary societies, including the New York State Veterinary Society, that, in my opinion, are operating upon a wrong principle. I hold that we must have societies of graduates or societies of quacks. The moment we admit non-graduates into State societies and give them certificates testifying that they are worthy members, that moment we are lowering the standard of the regular profession, while we elevate and legalize quackery and empiricism.

It is poor encouragement for the young men of the profession, who have worked hard to graduate from a veterinary college, to find that they must recognize irregular practitioners as their peers. It is also poor encouragement for those about to enter college, if the quacks of the country are to be made legalized practitioners. The legislation may be such as to protect the future generation, but it is hardly justice to the present.

One reason why our society meetings are not better attended is that there are not a few of the graduates who do not approve of admitting non-graduates, however competent. I claim that no veterinary society will meet with permanent success unless it declares that no one can be admitted to membership unless he be a

graduate of a regularly chartered veterinary medical college. I am afraid that the United States Veterinary Medical Association is falling into the same mistakes as has befallen several of the State societies. I must confess I am surprised that President Dr. Liautard, for whom I have profound respect, would allow it, but no doubt the trouble lies to a great extent with the young men of the profession themselves. I am afraid that some among us judge the success of a society by the number of its members. I have been present on several occasions when the United States Veterinary Medical Association met, and no paper of profitable merit was read, and no profitable discussion indulged in. The same thing is only too true of some of the meetings of the State societies. It is poor encouragement for veterinarians who are actively engaged in practice to leave their business to attend a veterinary meeting and there find that what I have said to be true. It is impossible for educated veterinarians to discuss scientific subjects with ignorant "horse doctors."

At the last regular meeting of the New Jersey State Veterinary Society held last August at Long Branch, I was appointed on the Legislation Committee ex-officio, by our worthy President, Dr. Wm. B. E. Miller, of Camden. Now no one would like to see a proper veterinary bill passed by the State of New Jersey Legislature better than I would, but who would not rather have none than one legalizing the quacks of New Jersey? As I understand the bill recently passed by the New York State Legislature, this is just what that State has accomplished, at least as far as the present generation is concerned. I consider this is not as good as none at all. Before the bill was passed a quack was a quack, and a graduate a graduate, but now all the quacks that have conformed with certain immaterial requirements have become legalized practitioners of veterinary medicine and surgery, and are placed on an equality with the graduates of our veterinary schools. These *legalized* practitioners take special pains to inform the public that they are "registered veterinary surgeons," and display certificates in an unbecoming manner.

Although this New York State law has been in effect only a few months, yet the ill effects have already been felt by many of

the young graduates. A young professional friend of mine told me a few evenings ago, at my request, how the new law had affected him personally. The gentleman I refer to graduated from the American Veterinary College in 1884, and located not a great distance from the metropolis. As a matter of necessity, he has been obliged recently to meet in consultation one of these irregular practitioners, who behaved toward him in a very unbecoming manner, to say nothing of the medical ignorance displayed. This ignoramus is a *legalized* "registered veterinary surgeon," he having complied with certain requirements of the recent Act of the New York State Legislature. It seems to me this is a great imposition upon the public, as well as upon the educated doctor. The legislative Act in question, puts the college graduate of the nineteenth century and the illiterate, uneducated "horse doctor" on an equal footing, while it protects a generation of veterinarians yet unborn. In my opinion we are far better off here in New Jersey without any legislation on the subject, than are the people of New York State with the Act now in existence.

HOG CHOLERA, OR SWINE PLAGUE.

FIRST REPORT OF THE WORK OF DR. BILLINGS UPON SWINE PLAGUE.

By THOMAS BOWHILL, M.R.C.V.S., Temporarily Assistant at the Experiment Station for the Study of Contagious Animal Diseases, University of Nebraska.

(*Read before the Illinois State Veterinary Association at the Convention of the Stock Growers of the United States, Chicago, Ill., November* 11, 1886.)

* * * * * * * * *

The swine plague has not been so prevalent or so severe in Nebraska during the past summer or fall as during preceding years. The doctor thinks that the severe weather of last winter and the extreme wet, cold spring and early summer must have exerted some mitigating influence on the virulent activity of the micro-organism of swine plague. Dr. Holcombe, of Kansas, reports the same favorable condition with regard to swine plague

in that State. On account of lack of funds, Dr. Billings has been largely limited in his work to outbreaks in the vicinity of Lincoln, although he has made several trips of 100 miles or more into different parts of the State. The first case of swine plague that came under his notice occurred in swine belonging to Mr. W——, who lives about nine miles west of Lincoln. He had but a few cases, and these took a slow and chronic course. The doctor killed one of the animals, and on making an autopsy found the characteristic lesions of swine plague. The spleen was at once removed and placed in a sterilized bottle and taken home, and numerous agar. agar. tubes inoculated, in each of which developed one form of micro-organismal life. As soon as possible, a number of hogs were inoculated with these cultures, each of which died in the course of eight to fifteen days with unmistakable lesions of the disease. Cultivations from the spleen of these animals gave the same micro-organism as was found in the first instance. They were also found in the tissue of the intestine and other organs, and have since been found in every case of swine plague that has come under our notice.

Since I have been with the doctor, and after I had become acquainted with the method of staining micro-organisms, I have done most of this work that has been done in the laboratory, and I have succeeded in demonstrating the presence of the micro-organism in effusions in the abdominal and thoracic cavities, in the blood, in the spleen, kidneys, liver and lungs. This organism is oval in shape and very minute, requiring a one-twentieth of an inch oil immersion lens to demonstrate it properly. It appears to correspond in its morphological and staining characteristics, as well as in various biological phenomena—that is, in its growth on agar. agar. or gelatine and on potatoes—to the one discovered and described by Prof. Shutz, the accomplished pathologist of the Berlin veterinary school, though there are several clinical, experimental and microscopical points of differentiation in the disease, which make us inclined to doubt that the two micro-organisms are etiologically identical; that described by Shutz seems to be more virulent than the one we have been working with in Nebraska during the past year; this may perhaps be due to the

afore-mentioned mitigating causes, and remains to be determined hereafter. On the other hand, Schutz claims that the German swine plague is an infectious pneumonia, and does not mention, in the few autopsies which he reports, the ulcerated condition of the large intestine ("especially") and the peculiar circumscribed indurations which are so frequently met with in American hogs.

In the majority of our cases, and especially in very acute or severe ones (a characteristic autopsy of which will soon follow), the microscopical phenomena most certainly justify Dr. Klein's conclusion, that the disease in American, as in English hogs, is a pneumo-enteritis, though both in infection, under natural or experimental conditions, we meet with in cases in which the lesions are limited, more expressly to one than to the other of these complications. This micro-organism, as aforesaid, is an oval body, and hence, according to Koch, a bacterium—who classifies the pathogenic bacteriæ into (a) bacilli or rods, (b) cocci or round bodies, (c) bacteriæ or oval bodies. This bacteria colors best in methyl violet, though also with gentian violet, methylen green and fuchsin, though not so satisfactorily. Its protoplasm seems to be differentiated into two chemically different substances; for, when not allowed to remain too long in the coloring fluid, the poles, or ends of the bacteria, assume a dark color, separated by an uncolored band of substance; the colored plasma extends along the peripheries of the organism in a fine line uniting at the poles; this exactly corresponds to the description given by Prof. Schutz (see the Report of the Imperial Board of Health of Germany, 1886, page 381), who says: "If the bacteria are colored in a solution of gentian violet, they show in their central part an uncolored space surrounded by a blue colored line; the quantity of this colored mass is greater at the poles, so that the ends appear more strongly colored; they appear of a homogenous blue," when intensely colored. I think it well to mention that the coloring power of the solutions is much increased by adding the necessary quantity of a saturated alcoholic solution of the coloring fluid to a little more than equal parts of a solution of caustic potash, one to ten thousand of water. This organism offers some very puzzling biological conditions

to the eye of the observer; for, in studying its development with colored preparations from cultures, under the microscope, the observer will often see objects strongly resembling micrococci in appearance; more careful observations, however, will show that this is simply a stage in the development of this organism, and very careful observation will show that the cocci-appearing objects invariably have an ovoid form, though not so well marked as in mature bacteria. They proliferate with fearful rapidity. The first phenomenon seen is that the object increases in length and somewhat in breadth. The uncolored substance which appears to be a secretion of the poles, although the contrary may be the case, becoming more plentiful; when first one and then the other pole end, or colored substance, is separated, leaving two of the cocci-like objects as fine bodies in the culture; these are at first small, but rapidly increase in size, so that in the same field one has an appearance which would lead him to think, in colored specimens, that the culture had become polluted, unless he had seen the organism develop under the microscope in what is known as a "hanging drop," which is prepared as follows: Take an object glass that has a hollow chamber ground out of it, surround this chamber with a thin layer of vaseline; then take a clean sterilized covering glass and place in the middle of it a drop of sterilized beef infusion, or bullion, which is inoculated from any culture; the covering glass is now to be carefully turned over and placed upon the object glass so that the drop is in the middle of the excavation; it is then to be pressed down upon the covering glass, the vaseline making an impervious cavity, so that germs from the air cannot get in and evaporation does not take place.

When inoculated in beef infusion gelatine, which is prepared as follows: Fresh lean beef, 250 grammes; to this add 500 grammes of distilled water; place in a cool place for twenty-four hours, then strain off until you get 400 grammes of fluid, to which add ten per cent. of gelatine of the best quality, one per cent. peptone, one-half per cent. cooking salt, cook until the albumen is entirely precipitated, then neutralize to a slightly alkaline reaction, then strain off into sterilized test-tubes plugged

with sterilized cotton, fill tubes about one-third, sterilize this mass once more by heat, using care, or the stiffening power of the gelatine will be destroyed. Agar. agar. is prepared in a similar manner, one and not over two per cent. being substituted for the gelatine. Agar. agar. makes a gelatine that can be used at any ordinary heat of summer without becoming fluid, whilst gelatine melts between twenty-five and thirty degrees cent. It is also of no use to increase the quantity of gelatine, as by doing so you do not get a proper development of the bacteria. Inoculations of these bacteria in gelatine gave peculiar colony-like developments, somewhat resembling knots on a fine piece of thread, and not causing fluidification. There is nothing peculiar regarding their growth in agar. agar. When grown upon potatoes the culture is of a chromogenic nature, and becomes about the color of coffee when good cream has been added to it.

Since 1878 an almost continued series of investigations into the cause and nature of hog cholera have been made under the auspices of the agricultural department of the United States, which are to be found in its reports. The first of these were made by Messrs. Law and Detmers. Law seemed to have considered the disease to be due to a micro-coccus, quoting Klein in the following language, in the report of 1878: "Klein, who in 1877, cultivated a micrococcus for seven successive generations and finally inoculated the fifth and seventh generations successfully on two pigs, seems to have established that these microphytes are the ultimate cause of the disease." Detmers, in the same report, seems to have thought that a bacillus was the cause of American swine plague, to which he gave the name of "bacillus suis," which he says "are found invariably either in one form or another in all fluids, in morbidly affected tissues and in the excrements (?) and constitute beyond doubt the infectious principle or produce the morbid processes if transmitted directly or indirectly from a diseased animal to a healthy one." It is singular that both of these authorities should have received what appeared to be equally positive and confirmative results from two such entirely different organisms. The work of Law and Dr. Detmers is, however, entirely eclipsed by that of Dr. Salmon, who also

made his first report to the commissioners of agriculture at the same time (1878), and who has been engaged upon a more or less continued series of investigations for the agricultural department, upon this disease, which have been published in its annual reports ever since.

With Law, Salmon seems to have looked upon a micrococcus as the cause of this disease, up to the year 1885, and to have received experimental testimony, which justified him in saying: *Surely we have here sufficient evidence that a reliable vaccine might easily be prepared if we carry our investigations a little way further.* Page 57, report of 1883, in another place, the same authority says of this micrococcus that *these experiments were made and accounts of them published in advance of those of M. Pasteur, and the evidence furnished was all that could reasonsonably be required to decide a scientific question of this kind.* In the report of 1884, page 229, he (Dr. Salmon) enters into a polemic against Dr. Klein of England, who had discarded his micrococcus in favor of a bacillus, and then says: *A large number of observations similar to the above have been made, and in all cases, where a pure cultivation has been obtained, the organism which multiplied was a micrococcus, and when the virulence of such cultivated micrococci has been tested by inoculation experiments, typical cases of some plague have resulted.* Any one who carefully reads these reports which Dr. Salmon has made in regard to his experiments with this micrococcus, would certainly be led to the conclusion that "the evidence furnished was all that reasonably could be required to decide a scientific question of this kind," but alas, it does not seem to have brought Dr. Salmon even to any decisive conclusion, for in his report of 1885, page 785, he seems to have had some doubt about the correctness of this testimony, and that the scientific question had not yet been decided by him. Here he tells us that he was *perplexed by contradictory results, and failing to obtain any pathogenic germ by isolating the different forms found in peritoneal effusions. The discovery of a fine bacillus in Germany causing a disease in some which was regarded as identical with swine plague in England and the United States attracted our attention.* It is difficult to see why Dr.

Salmon should have become so suddenly perplexed in the face of the "evidence furnished by him which was all that could reasonably be required to decide a scientific question of this kind;" and which was apparently backed up by the most positive inoculation experiments.

But alas for mortal frailty, in the report of 1885, we are surprised at finding that Dr. Salmon no longer considers his micrococcus to have any important etiological connection with swine plague. He says on page 219, report of 1885, that in at least twenty-five cases of undoubted swine plague, pieces of splenic tissue, when spread out in a thin layer on a cover glass, dried and stained in some aniline color, *were found to contain the same microbe in greater or less abundance, and calls attention to an illustration which he has marked plate III, figure* 1, *when stained for one or two minutes in an aqueous solution of methyl violet, and examined with a Zeiss one-eighteenth homogeneous lens, they appear as elongated ovals, chiefly in pairs; the greater number present a center paler than the periphery. This may be due to a greater density or standing capacity of the peripheral portion. The darker portion is not localized at the two extremities as in the bacteria of septicemia of rabbits, but is of uniform width round the entire circumference of the oval.* Dr. Salmon gives exactly the same kind of experimental evidence which he furnished in previous years for the etiological connection of his micrococcus of these years with swine plague.

It may also be assumed that he has this time "furnished evidence which is all that could reasonably be required to decide a scientific question of this kind." It is also surprising that Dr. Salmon's description of the manner in which this microbe of his develops in gelatine, and on potatoes, exactly corresponds to the above of Dr. Billings. On page 215, report of 1885, Dr. Salmon says: "The bacteria manifests growth (on potatoes) by first staining the cut surface of the potato at the place of inoculation with a chocolate color," which Dr. Billings thinks corresponds near enough to our coffee color. He also gives a description of its growth in gelatine, on page 214, report of 1885, which exactly corresponds to that I have given above for Dr. Billings, which

Prof. Schutz gives for that found in Germany, and illustrates it with plates, which show a very marked resemblance to those of the cultures of Dr. Billings.

The description which Dr. Salmon gives of the manner in which this new microbe reacts against coloring matter does not correspond to any known variety of bacteria or cocci, but to spores, and I must therefore conclude that he has not yet given satisfactory evidence as to its etiological connection with American swine plague for the bacteria which I have myself colored in the effusions, blood and tissues of undoubted cases of swine plague, under Dr. Billings' directions—(some specimens of which I have the pleasure of laying before you and which will undoubtedly convince you of their nature) *invariably colored at both poles, with a clear centre in the body of the bacteria, and a blue line of connection along the periphery.* As I have previously said, I have never failed to find this bacteria in every case. As we nearly always killed the animals I found them in the spleen, kidneys and lymphatic glands in an absolutely pure condition. In some few cases where the animals had been dead some few hours, but where the autopsies where made early in the morning, before heat had time to set up decomposition of the carcasses, and the animals had died during the night, I found a few cocci and bacterium of putrefaction also present, but the genuine bacteria always predominated.

In England, Prof. Walley recently read a paper on swine plague, before the third annual meeting of the National Veterinary Association of England. I agree with him as to the term swine plague being the most descriptive and technical designation for the disease. On the other hand I must object to his definition by which he describes the disease as a "specific eruptive fever" peculiar to the pig, because there is no such thing as a specific fever that has lesions produced only by the rise of temperature, fever being but a symptom which accompanies, to a greater or less degree, nearly all irritative disturbances in the animal organism. This practice, not only in veterinary but human medicine, of describing diseases as fevers simply because they are accompanied by a rise in temperature, is and has been a great

injury to students, tending to mislead them from a true conception of the pathological essentials in disease. The disease which comes nearest to being an exception to the above is febris-intermittens, commonly known as fever and ague; but it has its specific symptoms, which, while accompanied by a fever having nothing to do with it, are dependent upon the presence and action of a known germ (the Spirocheton Obermeiri) in the organism. Tetanus is another disease that is accompanied by fever, but has its specific phenomena by which we know it. Swine plague proper, as I have seen it in America, is by no means an eruptive disease, if by eruption Prof. Walley means skin complications. The peculiar discoloration of the skin is due more to disturbances of the circulation and stasis than anything else, though it may be that embolism, due to the micro-organism, plays some part in it, especially as the phenomena seen would seem to indicate that these discolorations are due either to interferences of the circulation in the arterioles or a venous reflux—the vis a fronti being interfered with especially, as I find the myocardium in all cases in a condition of degeneratio adeposa (myo-malacia). It seems somewhat singular that when such eminent authorities in England as Klein, Axe and others, have been working so many years (since 1876) on swine plague, that they should not have been able to discover the true micro-organism. It is also singular that Prof. Walley should have made no mention of any other work done in America than that of Prof Law, and have neglected to mention that of Detmers and Salmon, especially that of Detmers, for, pathologically considered, it gives the best descriptions of lesions of swine plague and its clinical variations that have yet appeared. Dr. Billings' experiments go to prove the correctness of Walley's conclusions in regard to abortion, *as the micro-organism has been found in both the amniotic and spleen of fœti where the mother has recently died and the young were dead.*

Prof. Walley's description of the lesions in the kidneys is very meagre, as shown in the autopsy quoted, as in every case which we have seen, the disease is characterized by swollen kidneys and an excessive degree of parenchymatous inflammation. But his description of the hemorrhage into Bowman's capsule, or exces-

sive congestion of the malpighian tufts, is quite accurate, as it has been frequently seen here. His remark that pulmonary lesions are not very constant or necessary, does not correspond to the experience of Detmers or Billings in America.

In an outbreak among seventy-five hogs, which has been placed at the disposal of Dr. Billings, the pulmonary lesions have far exceded in intensity those of the intestines; the latter, with the exception of capillary congestion and the swelling of the mucosa, with more or less intestinal catarrh, which in some cases was entirely missed in the large intestines, have been entirely wanting in ten autopsies thus far made, the animals having died of œdema pulmonum. The pneumonia in hogs so far as we have seen it here, has been of a bronchial character, leading to casea-tion, and in some cases to necrosis; hemorrhage infarctions are frequent. It seldom happens that the intestinal tissue becomes complicated by indurated process, unless it be in very chronic cases; in general those tissues are reddened and swollen.

Our necroscopical observations in the above outbreak do not go to confirm Walley's assertion that "as a rule the fœces are either semi-solid or of a liquid consistency, as constipation has not only been remarked in this outbreak throughout, but in many others. When the intestinal lesions predominate, diarrhœa is undoubtedly present. His description of the mottled appearance of the lymphatic glands, which he compares to "the appearance of a 'queen's strawberry,'" was also met with by us in severe cases.

Mr. Archibald Robinson's remarks in the discussion on Prof. Walley's paper "that in the district of Baden, Germany, inoculation has been successfully carried out," show that he does not know what disease the Baden investigations had to do with, or else has a very poor knowledge of German. The Baden investi tions were made by Drs. Lydtin and Schotellius in regard to the protective powers of M. Pasteur's "vaccine contre rouget," which is the same disease as the German "rothlauf" or erysipelas of swine, a disease which has no pathological or etiological connection with the swine plague in Germany, England or America. The micro-organism of this disease being a bacillus or rod-bacteria, while that of swine plague in both Germany and America is an oval body. *(To be continued.)*

REPORTS OF CASES.

LARGE FIBROUS TUMOR IN RECTUM—REMOVAL—RECOVERY.

By W. H. Gribble, D.V.S.

A valuable trotting-bred gelding, one and a half years old, had been treated by an empiric some time for malarial trouble, but with no success.

On our being called, the owner informed us that it had not been doing well for several weeks, seeming stiff in the loins and unable to lift its hind feet up properly; also that the act of defecation was accomplished with much trouble, being accompanied with pain, straining, groaning, etc., these symptoms varying in intensity according to the state of the fœces, being worse when costive than when loose.

On examination, temperature, pulse and respiration were fonnd normal, but while watching him he undertook to empty the rectum, when he strained most terribly, a dung ball or two at a time being passed with considerable force.

These actions led us to suspect some interference with the normal size of the rectum; so, after an enema of warm water, we immediately made an examination with the following results:

On the median line, directly under the sacrum and between it and the rectum, we felt a hard mass, somewhat rounding, slightly movable, and in size about seven inches long, five inches wide, and three inches thick.

We diagnosed it a fibrous tumor, which from its size caused the symptoms mentioned by being an obstruction to half or more of the diameter of rectum.

After our explaining the case, the owner left the matter of treatment entirely to us, being positive from the actions of his colt that the tumor had been growing quite rapidly of late and would soon cause the animal's death.

We ordered oleum lini Oss twice daily for two days, together with soft food and frequent enemas; then we removed the growth, accomplishing our object much easier than we had anticipated.

The animal was placed in a narrow stall and kept close to one side by means of a pole; several enemas of hot water were used

for the purpose of cleansing and expanding the rectum; then entering this organ with a concealed bistoury in hand, an incision was made the whole length of the inferior border of foreign growth, when it was quite easily separated from the surrounding tissues with the fingers, until reaching the anterior superior portion, where it seemed to continue anteriorily in a strong fibrous cord, in which we could plainly feel the pulsating of an artery.

Passing a looped wire around this cord, an assistant applied sufficient traction to hold it steady, when the ecraseur was applied and the whole mass removed, which weighed two pounds. Three days after the operation the colt was doing well.

The operation of circling the cord with the ecraseur chain was not as easily done as may be supposed, taking us more than an hour, as the growth was too large to pass through the loop of the chain, making it neeessary to put the instrument together wholly within the rectum, and to do this with one hand. Since the operation I have thought it might have been done easier and quicker by having a strong wire pass through a piece of small gas pipe, twisting the wire at outer end by means of a bolt and pincers.

FRACTURE OF THE TRACHEA.

By Geo. L. Warner, D.V.S.

I send an account of a very rare and interesting case brought to my notice on September 30th, 1886, which I hope you will kindly insert in the Review. The particulars of the case are as follows:

On the above-mentioned date there was brought to the New York Veterinary Hospital a bay mare, twelve years old, for examination as to glanders. A slight nasal discharge gave the owner an idea that said disease existed. However, upon careful scrutiny, I failed to find any such evidence, and certified to that effect. The owner thereupon recited a series of symptoms that to me were puzzling, pointing only to some respiratory obstruction, inclining slightly to an existing polypus. The symptoms quoted were as follows: Upon buying the mare, he placed a boy upon her and directed her to be ridden to the Jersey City ferry.

When walked about 100 yards, there appeared a difficulty in the animal's breathing; she immediately became greatly distressed, and came very near falling; he then directed the boy to lead the mare to this place, which was done.

I had the animal trotted up and down the block four times, without producing any of the above-mentioned symptoms; but upon having her ridden, the urgent dyspnœa presented itself, along with a flow of blood from both nostrils and mouth. I had the animal returned, and then found the very rare condition—a fracture of the trachea; midway in its length the edges of the fractured tube were partly everted and partly inverted, and far apart; in extent it was about four inches. Pressure upon the skin over the opening produced symptoms similar to those shown when the animal was ridden. I believe this to be a very rare occurrence, and can find no account of the same in the veterinary works I possess.

In the treatment I could do little, on account of its low situation. If it had been higher up I might have inserted a tube with probable good results, but as it was, I advised the owner, should he retain the mare, to drive her with the head in as nearly the natural position as possible, using the martingale to accomplish it.

I have since heard nothing as to what benefit was derived from the above suggestion, nor do I place much stress upon it. My sole object in sending you this was to find if there had been any similar case recorded, trusting it will be of interest to the younger members of the profession.

PECULIAR CONDITIONS FOUND IN THE UTERUS OF A MARE THAT DIED FROM PLEURO-PNEUMONIA.

By A. C. Young, D.V.S.

I have long intended writing you, but a doubt of its acceptability, and having little or nothing of interest to write about, it has been postponed until the discovery of the following remarkable case.

I give the history in its entirety, and ask your opinion, as a

number of my M.D. friends have taken issue with me in regard to it. The case is as follows:

A Mr. Pendleton residing in this city owned a very fine mare, used for breeding purposes, whose colts have always been at a premium. She has had altogether ten foals. In the latter part of April, 1885, she was covered by a pacing horse here, and, though tried several times after, she refused him, as she has invariably done, with the exception of two foals out of the ten; this sign being always conclusive with her owner of pregnancy. Though they have tried her several times, at regular intervals, in every case she would refuse the horse.

After being covered in April, the mare was allowed to run in a small pasture of four or five acres, adjoining the house of a stock-man in the country. There were two other mares in the paddock, all having colts at their sides; consequently considerable kicking occurred between them. Mr. Pendleton saw the mare at different times during the summer, and during the latter part of September noticed the animal seemed unwell; she was shrunken at the hips, coat staring, and losing flesh. He was convinced the mare had aborted, though the man in charge seeing her a number of times each day, had never found evidence of it, nor could they find any, though the pasture was small and neither hogs nor dogs are kept at or near the farm.

The man in charge did not think abortion had occurred, but that she was in estnun, so the mare was again taken to the horse, but she refused him. After taking her back to the paddock, it was believed a horse used as a teaser got loose and covered her, though the evidence on this point is not conclusive.

The same month, September, she was taken by up her owner, stabled and clothed all winter, but seemed to get little better. The latter part of March, 1886, she was again put to the horse, was covered, and nine days after was covered again; refused him several times after, and seemed to get better somewhat, until the fore part of June, when she grew worse and continued so up to the time of her death, which occurred October 17–18.

I was called to see the animal in July of 1886, but was unable to find a cause as to her sickness. She was debilitated, run down

in flesh, and evinced pain on being moved; there was a paleness of the visible mucous membrane; respiration slightly increased; which latter I attributed to the distention of the abdomen pressing against the diaphragm. Iron, nucis vomicæ and gentianæ were prescribed, but was told afterward they produced little change for the better.

I was again called on October 17th, as her owner felt sure she was about to die. On examination, pneumonia of the right lung, complicated by pleurisy, was the diagnosis. Her functions were, temperature, $101\frac{3}{5}°$; pulse, 96; respiration, 42. No treatment was ordered as her owner was away, and during the night the animal died.

At the request of Mr. Pendleton a post-mortem was held, to determine whether the mare was with foal, as it would decide if he could recover the $50.00 service fee of the horse.

On opening the thoracic cavity the condition of the right lung, pleuritic adhesions and the enormous effusion, confirmed the diagnosis which had been made. The uterus was next examined; the ovaries, fallopian tubes and horns, were in a normal condition; and on making an incision into the uterus, a fine large foal was discovered, enclosed in its membrane, healthy in every way, and evidently dead but a short time; this fœtus was six and a half months old. After removing it from the placenta, a black mass still remained in the uterus, which set me conjecturing, ere removing it, as to what abnormality could exist in this location. I removed the mass, incised the soot-colored membrane, and found a perfectly mummified fœtus, also of a soot color, well developed, except the frontal bone. Hoofs well formed; hair on eyelids and upper and lower lips; length, from occipital bone to root of tail, thirteen to fourteen inches; eyes badly shrunken, nothing remaining but the lids covering the openings.

According to Fleming, the fœtus is fourteen to twenty-two weeks old. I have both fœtuses in specimen jars, and were it not such a long way to New York, your museum should have them, provided you considered the case sufficiently interesting.

The mare at the time of her death was fifteen years old, never sick a day in her life, except a touch of pink-eye, the form of influenza which was so prevalent here at one time.

Now the rock on which some of my M.D. friends and myself split, is this: they contend it is a case of twins, with the death of one, while I think the mare never aborted during 1885, but carried this mummification in one of the horns of the uterus up to the time of death, and that the contamination produced death. My entire belief is based upon the history of the case as obtained from her owner, and which I have given you to the best of my ability. Mr. Pendleton is a thoroughly reliable man, shrewd on the questions of horseflesh, and one who immediately notices any change in the health of his animals.

CLIPPINGS FROM MEDICAL PAPERS.

DO LOWER ANIMALS HAVE TYPHOID FEVER?

For many years it was contended that the so-called pig-typhoid, or, as it is now known, infectious pneumoenteritis, was identical with typhoid. French veterinarians have also claimed that horses suffered from human typhoid fever; but the swine-plague has been found to be a distinct disorder, and the question whether the horse can have typhoid is still unsettled.

Recently, however, Dr. J. Bland Sutton (*Journal of Comparative Medicine*,) brings forward evidence to show that monkeys, tigers, and beavers may have enteric fever.

In 1839 M. Raper describes an epidemic of this disease which broke out among the monkeys in the menagerie of the Muséum d'Historie Naturelle, Paris. On this occasion M. Serres, who had previously observed the affection in monkeys, dogs, and cats, and had made careful preparations of the intestinal lesions, was able to make careful observations on the animals during life. The symptoms were very striking, being diarrhœa, increased frequency of pulse, and fever ending almost always in death.

Dr. Bland describes cases of typhoid fever which he observed, in 1822, among the monkeys of the London Zoological Gardens.

While making a post-mortem examination on a lemur which

had died in the Zoological Gardens, from perforation of the ileum near the cæcum, the Peyer's patches were found to be ulcerated in the same manner, and presented the typical appearance as these structures do under the same condition in man. No other organ presented lesions of note. For some days before death the lemur had suffered from profuse diarrhœa, the keeper experiencing considerable difficulty in keeping the cage clean. Dr. Bland was so positive that the ulcerations were typhoid that the death of other monkeys were predicted.

Seven days later another monkey, which had lived in the cage with the first, died with the same symptoms and lesions; later, two other monkeys and a tiger died of the same disease. At the time these cases occurred typhoid fever was raging in the neigboring district.

In 1885 the Zoological Gardens received an instalment of six Canadian beavers. Four of these died with a disease lasting about six weeks, and characterized by disinclination to food and profuse diarrhœa. On post-mortem examination ulcerations of Peyer's patches were discovered.

Dr. W. L. Conklin, Superintendent of Central Park Menagerie, reports a case of apparent typhoid occurring recently in a monkey. The animal had suffered from diarrhœa and hemorrhages from the bowels, and an autopsy showed extensive ulcerations of Peyer's patches. Dr. Bland states that the utmost care was taken to exclude the question of tuberculosis.

Experiments with cultures of the typhoid bacillus have, it is believed, resulted in producing a disease allied to, or identical with, typhoid in the rabbit and guinea-pig, although here experimenters differ.

There is, however, more or less evidence that typhoid fever can affect not only man, but the quadrumane—the tiger, cat, and dog, the guinea-pig and rabbit, and possibly the horse.

The importance of this fact, if established, is twofold: It makes it possible to study the disease more systematically, and to apply to it experimental methods; again if our menageries and our stables can breed the typhoid poison, it is a matter of the highest importance that this should be known.—*Medical Record.*

THE PASTEUR INSTITUTE.

It is well known that several deaths have happened of persons who have undergone M. Pasteur's method of protective inoculation for rabies or were still undergoing the process, and it is no more than natural that each succeeding death should have had its effects in undermining the confidence that had come to be felt in the system. Looking at the precise facts, however, we may still cherish the feeling that a great triumph has been set on foot if not already accomplished.

On the 5th of this month, as we learn from the "Gazette hebdomadaire de médecine et de chirurgie," the Paris *Conseil municipal* ceded to the society of the *Institut Pasteur*, by a vote of thirty-three to fourteen, for a period of ninety-nine years, the land that had previously been allotted to it for thirty years only.

In the course of a discussion that preceded the vote, a statistical statement was furnished giving the results thus far accomplished. The whole number of persons treated amounted to 1,656, of whom 15 had died; 1,009 of these persons belong in France, and 3 of them died; 182 (including 50 bitten by rabid wolves) came from Russia, and 11 of them died (3 after dog-bites and 8 after wolf-bites); 20 from Roumania, of whom 1 died; and 59 from England, 17 from Austria, 74 from Algeria, 18 from America, 2 from Brazil, 42 from Belgium, 58 from Spain, 7 from Greece, 8 from Holland, 25 from Hungary, 105 from Italy, 20 from Portugal, 2 from Turkey, and 2 from Switzerland, none of whom died.

Including the cases of persons bitten by rabid wolves, who furnish more than half the deaths, the total mortality amounts, therefore, to less than one per cent. Surely this is most encouraging. It will scarcely be maintained that any such proportion of immunity would have followed in the natural course of things, at least among those who do not utterly deny the existence of rabies as a specific disease; and the objection that time enough has not elapsed to enable us to judge of the fate of the bitten persons, in view of the long incubation popularly ascribed to the disease, is fast losing its force, for some of the cases date

back now more than a year. Even if we were to concede the non-existence of rabies, and accept the view that those who are supposed to die of it really perish from fright, M. Pasteur would still be entitled to the gratitude of mankind for having saved 1, 641 persons from dying of fright.—*N. Y. Med. Journal.*

RECENT EXPERIMENTS WITH PASTEUR'S INOCULATION METHOD IN VIENNA.

Some time ago Dr. Ullmann, of Vienna, went to Paris and studied Pasteur's method of preventive inoculation for rabies. He brought virus and all the necessary materials for establishing a laboratory in Vienna, and the work of manufacturing the rabbit's cords has been successfully going on. He finally undertook preventive inoculations upon men, and up to a recent date had operated upon sixty-one persons supposed to have been bitten by rabid dogs, so far without a death.

As an offset to these practical results, Professor v. Fritsch has been making some experiments, which appear to show that the Pasteur method is inefficient upon persons who have, beyond any doubt, received the virus into the system.

He took sixteen rabbits and, having trepanned them, inserted the rabic virus directly beneath the membranes. He then began at once to perform the preventive inoculations, as done by Pasteur. Despite these, every one of the rabbits died of hydrophobia, as was shown by inoculating other healthy rabbits with bits of the medulla of the dead animals. Another series of rabbits, for a control experiment, was trepanned and inoculated, but did not subsequently receive preventive inoculations. These also all died. A second series of experiments was performed with similar results, except that one rabbit did survive. A similar experiment with a similar result was performed upon five dogs.

Thus it seems that in cases in which the virus is, beyond all question, deposited in the nervous system, the results of preventive inoculations are *nil.* But it must be admitted that Professor Fritsch's tests were very severe, and it cannot be said that they prove that the preventive inoculations are futile when the virus is only deposited in the superficial soft tissues of the body. —*Medical Record.*

REVIEWS AND NOTICES.

VETERINARY PHARMACOPŒIA. By George Greswell. (Bailliere, Tindall & Cox, London).

We have on several occasions called the attention of our readers to the writings of Dr. G. Greswell, and it is once again our pleasure to bring before the profession this new work, which comes to make a good addition to the library of veterinarians. Since the works of Gamgee, Tuson and Morton, which we believe are now out of print, there has been no book in veterinary pharmacopœia which is so complete as the book now published by Bailliere, Tindall & Cox. Deprived of all useless material, (treatise of diseases) as it is, and essentially treating only of the medicines used by the veterinarians, with their composition, nature, compounds, effects, doses, etc., the book no doubt supplies a want much felt, and deserves all the success that a good and useful work is entitled to.

LINDSAY & BLACKISTON'S PHYSICIANS' VISITING LIST, for 1887.

This work is once again before us. It is well fitted for veterinary practitioners; in fact it is the only one which has for many years proved satisfactory in our own use.

ANNUAL MEETING U. S. V. M. A.

LIST OF OFFICERS AND COMMITTEES OF THE UNITED STATES VETERINARY MEDICAL ASSOCIATION, FOR 1886-'87.

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NOTICE.

Dr. D. P. Frame, of Burlington, Iowa, desires to dispose of his practice to a young veterinary graduate, on account of important engagements in another business.

SOCIETY MEETINGS.

NEW YORK STATE VETERINARY SOCIETY.

The regular monthly meeting of the New York State Veterinary Soceity was held in the lecture-room of the American Veterinary College, Dr. R. W. Finlay in the chair.

Minutes of last meeting were read, and on motion were adopted.

At the request of the Chair, Dr. Faust stated to the meeting that he had lately been telegraphed for by the Board of Health of Dutchess County, to examine a herd of three hundred and fifty calves, which had been brought from Delaware, nothing wrong being noticed until they reached Dutchess County, when it was supposed that they were affected with contagious pleuro-pneumonia. This he found was not the case, but they were in a very bad way, and he expected about half the herd would die. It was a case of strangylus filaris, which was proved by examination of those that had died. Some held it was not contagious, but he considered it was, as in this instance, some cattle in an adjoining field where the calves were had become affected. In one case only did he find solidification of the lung, which he considered secondary.

Dr. R. A. McLean considered the trouble a traumatic one, and the question was, where did the first cenception take place, were the filaris inhaled in Delaware? After some discussion had been indulged in he spoke of a case of glanders that he lately had, in which a so-called veterinary surgeon had been prosecuted for treating, and for which he was fined one hundred dollars or one hundred days

in prison, where he was when he heard of him. This was the result of his treating a case of glanders as a wart, and while doing so allowing it to work to a wholesale meat wagon. The subject of glanders was partly taken up by several cases being given by some of those present.

Dr. R. W. Finlay spoke of a case that he had lately had in court. On his first visit, about a month ago, he found the general vitality very low, its history being that about three weeks previous the horse had slipped, hurting himself, which resulted in some small abscesses appearing. The case was treated with preparations of arsenic and fumes of sulphur with good food; the horse did well under this treatment, the temperature coming down from 101½ to 98⅘°, the leg better, general appearance better, and about fifty pounds heavier, with the discharge stopped. He again saw the horse, and gave a certificate that the horse was free from glanders. The owner, however, got arrested, and the horse was destroyed; he was brought to cause in the interest of his certificate and the owner, there being two graduated veterinary surgeons on the other side. The case was thrown out of court, and the owner would now try to recover the value of the horse. One of the surgeons had diagnosed the case as one of glanders in May last and had failed to make any report on the case till recently, for which he was censured by the court.

Dr. Bowers related a case where he first found simply a swelling of the submaxillary gland; the horse was kept working, but isolation was ordered. A month after he saw the horse again, when he was lame; diagnosed glanders; but thought he would try the so-called treatment for glanders. He lanced the abscess when it got large, and found laudable pus; abscess after abscess formed, which were lanced and washed with a very strong solution of carbolic acid, and under the treatment the horse got better; leg got well, everything seemed to return to its normal state, when, after some time, the case turned out to be a very bad one of glanders.

Dr. Pendry said it was quite apparent that there was a difference of opinion as to what really constitute premonitory symptoms of glanders, and as proof of this, he would call the attention of the meeting to a case in point, which occurred in his own practice. He had been treating for some time a newly purchased horse for influenza, the case got along very slowly, the temperature keeping up between 102° and 103°; all at once he took a turn for the better, eating well and taking on flesh, but the temperature still kept about 102½°, with a discharge at the nostril and one or two abscesses appearing on one of the legs; the swelling of the sub-maxillary gland was considerable, but not much weight was given to this, as it was not of the nature that was looked for in glanders. The owner was informed that the case was suspicious, and that a consultation would be held. A well-known practitioner was called in, who, after an examination, said the horse was glandered. This same gentleman saw the horse again on the following day in the interest of the party who sold the horse, and again expressed the same opinion. About the next day there was quite a discharge from one of the nostrils; this, with the corded condition of the lymphatics along the cheek, cleared up what little doubt I had of its being glanders, and so informed the owner of the opinion we had arrived at, at the same time expressing a willingness to meet any one he might like to see the case. He spoke of another well-known practi-

tioner, whom I called in, and the result of the examination was that he disagreed with the diagnosis made. The swelling was lanced, and a large discharge of thick, though somewhat greenish in color, pus was had. He left the case for the day, when the next news he had was that the last gentleman called in was treating the case. He continued to do so for some considerable time under lock and key. The result of the treatment was, he understood, that the horse was now working, and had been for several months.

The Chair said it did certainly appear that there was a difference of opinion, and he thought it would be a good idea to have a paper read, so that the subject could be thoroughly discussed.

Dr. R. A. McLean offered to read one on the subject at the March meeting. The Chair thought it should be read at the next meeting, but Dr. McLean thought there would be enough at that meeting, it being the annual one.

The Board of Censors reported in favor of Wm. Masham, V.S., and Wm. N. F. Harris, both of New York city, who were duly elected to membership.

Meeting then adjourned till the second Tuesday in December, when the election of officers will take place.

W. H. PENDRY, D.V.S., *Secretary.*

ILLINOIS STATE VETERINARY ASSOCIATION.

At the annual meeting of the Illinois State Veterinary Association, held Thursday, Nov. 11th, there were several interesting addresses and papers. Among these was one of considerable length, giving the result of the experiments made by Dr. F. S. Billings, of Lincoln, Neb., to determine the cause of so-called hog cholera. In this he severely criticises the conclusions arrived at by Dr. Salmon in the same direction, a portion of which we publish elsewhere in this issue. Officers were elected as follows: President, B. B. Page, Rockford; Vice-Presidents, A. B. McGuire, of Joliet, W. L. Williams, of Bloomington, and James Bond, of Streator; Corresponding Secretary, J. F. Ryan, Chicago; Recording Secretary, Phillip Whitman, Chicago; Treasurer, A. H. Baker, Chicago; Board of Censors, R. J. Withers, J. Hughes, and J. Casewell, all of Chicago.

NEWS AND SUNDRIES.

It is estimated that there are nearly 75,000 horses in New York city, and about 200,000 in London.

PLEURO-PNEUMONIA IN INDIANA.—Dr. D. H. Patton, of Remington, Ind., writes us in reference to the reported outbreak of pleuro-pneumonia in Jasper county as follows: "Dr. Navin, the State veterinarian, came and made an examination of a carcass of one of the affected cattle this morning, and pronounces it genuine pleuro-pneumonia. Out of the herd of eleven, four

were diseased. One of the four was dead, and the other three are expected to die. But I think they are to be destroyed and burned."—*National Live-Stock Journal.*

STAMPING OUT PLEURO-PNEUMONIA.—Mr. T. Duckham, in a letter to the *Live-Stock Journal*, London, urges that the only protection against the spread of pleuro-pneumonia consists in slaughtering not only the affected animals, but also all that have come in contact with them. He says: "The losses the disease have imposed upon the nation since its first introduction in 1842 run up to an inconceivable amount. It has spread distress and ruin in very many cases throughout the length and breadth of the United Kingdom. Yet there are local authorities who hesitate to deal with it in the only rational manner to insure its extermination, by the slaughter of all animals that are diseased, and all that have been herded with them. The frightfully contagious nature of the disease, and its treacherous and fatal character, have long since proved that to be the most economical and only certain way of exterminating it." The spread of the disease in Great Britain is shown by the statement that "on August 21st it was in ten English counties, the North Riding of Yorkshire, and the metropolis, and in eight counties in Scotland; on September 18th it was in thirteen English counties, the north and West Ridings of Yorkshire, and the metropolis, and in eleven counties in Scotland."—*National Live-Stock Journal.*

INOCULATION FOR PLEURO-PNEUMONIA.—In our last issue we referred to the discussion going on in England regarding inoculation to prevent pleuro-pneumonia, and mentioned that the majority of those who took part in the discussion were opposed to trusting to this system. On this subject the editor of the *Live-Stock Journal*, London, says: "It should be mentioned that a few members of the veterinary profession are strongly advising that a trial should be given to the system of inoculation, to be practiced on uncontaminated animals in herds in which pleuro-pneumonia has broken out. Some of the local authorities, in their reluctance to incur the cost of slaughter, will probably

clutch eagerly at this idea, which is advanced on professional authority. In view of the fact that it is admitted 'that pleuro-pneumonia is proving itself a much more troublesome malady to eradicate than cattle plague or foot-and-mouth disease,' we think it is somewhat injudicious to advise a remedy which, it is also confessed, 'has never been thoroughly and publicly tested in this country.' We want to get rid of the disease as fast as possible, and not to try experiments with systems of inoculation. It is most desirable that in some scientific institution inoculation should be submitted to a thorough test, but our live-stock interests are too valuable to allow experiments to be tried upon them."—*National Live-Stock Journal.*

Inoculation for Pleuro-Pneumonia.—Dr. D. McEachran, live-stock inspector for Canada, in a recent address before the Veterinary Medical Association, in Montreal, expressed his opinion on the danger and impracticability of inoculation to prevent the spread of pleuro-pneumonia, as follows: "On this important question, time does not permit me to enter at length to-night; suffice it to say that in every country in the world where it has been impartially tried and reported on, the report has been unfavorable. It is not only a useless, but a dangerous practice, not only in districts where the invasion is new and limited, and it is not warranted by any known benefits. Many die from the operation itself, and wherever it is practiced it has to be kept up; thus in large dairy byres in Scotland, in Glasgow, and Edinburgh, where the lives of the cattle are protracted by inoculation, every fresh animal taken into it has to be inoculated; hence we have a constant supply of the virus existing and kept active in these centers of disease. It is bad enough thus to perpetuate such a disease in countries where it has gained a foothold. Yet I wonder that the agriculturists of these countries have not long ago risen as one man to demand that this iniquitous practice be made illegal. It is as incumbent on the government of Great Britain to do this as it was to make inoculation with small-pox virus illegal. What, then, would we say to those who would propose such a practice to save the lives, if possible by that means, which I doubt, of a few cattle, no matter what their value

might be, in a country free from any taint of the plague. Language strong enough cannot be found to denounce the suggestion. Knowing as we do that the so-called recovered (I use the term 'so-called' because I do not believe perfect recovery of the lung is possible from this disease) and the inoculated cases are the secret sources of dissemination of contagion in this disease, and those occult outbreaks, properly traced up, would be referable to a recovered or an inoculated case."—*National Live-Stock Journal.*

INTERESTING CASE OF RABIES AT BRADFORD.—We understand that one of the Bradford police force was a fortnight ago severely bitten by a dog supposed to be mad. The evidence obtained from a post-mortem examination of the animal, made by Dr. Hime, was, as is usual, quite undecisive. However, Dr. Hime, to decide the question, applied Pasteur's test, by inoculation of a rabbit with material taken from the dog, he being the first to do so in this country. The rabbit has shown the usual symptoms of rabies, and there is no longer any doubt as to the dog having been rabid. It had bitten the man on two fingers of his right hand, and died ten days after while under Hime's observation. It is extremely fortunate that Dr. Hime, who for a considerable time was in Paris studying Pasteur's method, has been thus able to utilize his knowledge of the subject. He has previously been able, by application of the same method, to pronounce several suspected dogs to be free from rabies. Fortunately the policeman was, by Dr. Hime's advice, despatched to Paris for treatment, and his public history will be watched with interest. Dr. Hime, it will be remembered, took over to Pasteur a party of nine persons bitten by a rabid dog last March, and subsequently had himself to undergo a course of treatment by M. Pasteur for serious injuries received. One person bitten by the same dog which bit the nine died of rabies, but he was not treated by Pasteur.—*London Lancet.*